

CLAIMS

I claim:

5 1. In an IP-based cellular wireless communication system, a method of spatially controlling cellular phone access, the method comprising:

receiving an IP message at a central facility, the message including information about whether a cellular phone device is in an area of restricted service access, the message including an identifier associated with the cellular phone device;

10 updating data associated with the cellular phone device in response to receiving the IP message.

2. A method as in claim 1 wherein the central facility is a switching center that controls access to a plurality of cellular base stations.

15 3. A method as in claim 1 wherein the updating includes adding the identifier to a table of hushed phones.

4. A method as in claim 1 wherein updating includes setting a status associated with the 20 cellular phone in one or more location records to be a hush status.

5. A method as in claim 1, further comprising:

sending an IP message to the cellular phone device.

6. A method as in claim 5 wherein the IP message includes a hushing command.

7. A method as in claim 5 wherein the IP message includes an HTTP web page with selectable buttons associated with hush options.

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8. A method as in claim 1 wherein the identifier is a Mobile Identification Number.

9. A method as in claim 4 wherein the one or more locator records include a Home Location Register (HLR).

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10. A method as in claim 4 wherein the one or more locator records include a Visitor Location Register (VLR).

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11. In an IP-based cellular wireless communication system, a method of spatially controlling cellular phone access, the method comprising:

receiving a call for a cellular phone device at a central facility;

determining whether the cellular phone device is in an area of restricted service access;

if not, processing the call; and

if so, processing the call including special quiet zone processing.

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12. A method as in claim 11 wherein the cellular phone device and the second cellular phone device are a same cellular phone device.

13. A method as in claim 11 wherein the area of restricted service access and the second area of restricted service access are a same area.

14. A method as in claim 11 wherein the special quiet zone processing includes sending the
5 call to a phone mail box.

15. In an IP-based cellular wireless communication system, a method of operating a quiet zone controller comprising:

detecting a cellular phone device entering an area, said cellular phone device being
10 serviced by a service provider control point; and
sending an IP message to the service provider control point, the IP message including an identifier associated with the cellular phone device.

16. A method as in claim 15, further comprising:

15 monitoring the cellular phone device;
determining when the cellular phone device has left the area;
sending a second IP message to a service provider control point that includes information that the cellular phone device has left the area.

20 17. A method as in claim 15, further comprising locally maintaining a list of cellular phone devices in the area.

18. A method as in claim 15 further comprising:

causing an IP message to be sent to the cellular phone device that includes notification that the cellular phone devices has entered a quiet zone.

19. A method as in claim 18 wherein the IP message comprises an HTTP web page.

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20. A method as in claim 13 wherein determining whether the second cellular phone device is in a quiet zone includes steps of:

requesting base stations to page the cellular phone device;

receiving an acknowledgement from one of the base stations;

10 if a message is received that indicates the cellular phone device is in a quiet zone,

processing the call as a quiet zone call; and

if a preset period of time passes without receiving the message, processing the call as a standard call.

15 21. A cellular phone device that is capable of varying its behavior in response to a hushing message, wherein the hushing message comprises IP packets.

22. A cellular phone device as in claim 21 wherein the IP packets comprise an HTTP web page that includes selectable buttons and wherein the cellular phone device changes its behavior according to a set of selectable buttons that is selected by an operator of the cellular phone device.

20 23. A cellular phone as in claim 19 wherein the phone goes into a quiet mode in response to the hushing message, the quiet mode including the volume on a ringer being turned off.

24. A cellular phone as in claim 19 wherein the phone goes into a non-transmit mode in response to the hushing message, the quiet mode including a transmitter of the phone being kept off.

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25. In an IP-based cellular wireless communication system, an apparatus for spatially controlling cellular phone access, the apparatus comprising:

means for receiving an IP message at a central facility, the message including information about whether a cellular phone device is in an area of restricted service access, the
10 message including an identifier associated with the cellular phone device; and
means for updating data associated with the cellular phone device in response to receiving the IP message.

26. In an IP-based cellular wireless communication system, an apparatus for spatially controlling cellular phone access, the apparatus comprising:

a processing system;
a memory storing code for operating said processing system, said code comprising:
code that receives an IP message at a central facility, the message including information about whether a cellular phone device is in an area of restricted service access, the
15 message including an identifier associated with the cellular phone device; and
code that updates data associated with the cellular phone device in response to receiving the IP message.

27. A computer program product for spatially controlling cellular phone access in an IP-based cellular wireless communication system, the computer program product comprising:

computer code that receives an IP message at a central facility, the message including information about whether a cellular phone device is in an area of restricted service access, the
5 message including an identifier associated with the cellular phone device; and

computer code that updates data associated with the cellular phone device in response to receiving the IP message; and

a computer readable medium that stores the computer code.

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27. The computer program product of claim 26, wherein the computer readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied in a carrier wave.

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28. A quiet zone controller in an IP-based cellular wireless communication system, comprising:

means for detecting a cellular phone device entering an area, said cellular phone device being serviced by a service provider control point; and

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means for sending an IP message to the service provider control point, the IP message including an identifier associated with the cellular phone device.

29. A computer program product for operating a quiet zone controller in an IP-based cellular wireless communication system, comprising:

computer code that detects a cellular phone device entering an area, said cellular phone device being serviced by a service provider control point; and

computer code that sends an IP message to the service provider control point, the IP message including an identifier associated with the cellular phone device; and

5 a computer readable medium that stores the computer code.

30. The computer program product of claim 29, wherein the computer readable medium is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal
10 embodied in a carrier wave.

31. A method of responding to hush and anti-hush commands at a cellular phone in an IP-based cellular wireless communication system, the method comprising:

receiving an IP message including a hush command from a central facility; and
15 entering a hush mode in response to the hush command.

32. A method as in claim 31, further including operating in the hush mode.

33. A method as in claim 31, further including receiving a second IP message including an
20 anti-hush command and exiting hush mode.